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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,527	02/28/2002	Rong-Chang Liang	26822-0002C1	3462

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EXAMINER

TRA, TUYEN Q

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 07/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,527

Applicant(s)

LIANG ET AL.

Examiner

Tuyen Q Tra

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-25, 30 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-19, 21, 22 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 14 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Oath/Declaration

1. The declaration filed **02/28/02** is acceptable.

Drawings

2. The drawings in this application are objected to by the Draftsperson as for the reasons noted on the attached Notice of Draftsperson's Patent Drawing Review, form PTO-948.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims **1-4, 7-9, 26-29** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 22, 28, 30, 45 and 47 of previous Application No. 09/518,488. Although the conflicting claims are not identical, they are not patentably distinct from each other because both disclose electrophoretic device with an electrophoretic suspension, a polymeric/polymer sealing layer, a dielectric solvent or solvent mixture, electrodes plate, a dispersion of a sealing composition which has a specific gravity lower than that of the dielectric solvent or solvent mixture and forming a sealing layer above the dielectric solvent or solvent mixture by solvent evaporation. However, claims 1, 22, 28, 30, 45

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and 47 of application serial number 09/518,488 do not implicitly disclose the display driven by an energy field. Since claims 1, 22, 28, 30, 45 and 47 teaches electrode plates which, in the other hand, generates electric field between two plates. Therefore, it would have been obvious to one ordinary skill in the art at the time invention was made to use electrodes for generating electric field in order to drive display device.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshiro et al. (JP402284125A with the translation on page 2, lines 4-10).

a) With respect to claims 1, 3-5 and 7, Oshiro et al. discloses a transmissive electrophoretic display in Fig. 4 comprising of a plurality of closed cells (7) which are filled with an electrophoretic suspension (6) and are sealed with a sealing layer (9), sealing layer (9) is a hot-melt adhesive layer together with layer (4) to form a sealing layer for pores 8A (the translation page 2, lines 4-10) display is driven by an electric field between electrodes. Oshiro et al. does not implicitly disclose that the sealing layer is polymeric sealing layer.

The use of general material for sealing layer such as polymer adhesive are well known in the art of electrophoretic for purpose of sealing display cells, lowering down manufacture and

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labor cost, as well as preventing mirror from breakage. Therefore, it would be obvious that the polymer is used in adhesive (9) as sealing layer for purpose of sealing display cells, lowering down manufacture cost and prevent device breakage.

b) With respect to claim 6, it should be noted from Oshiro et al.'s Fig. 2 and the translation (page 2, lines 4-10) that polymer is soluble in adhesive composition (9).

7. Claims 2 are rejected under 35 U.S.C.103(a) as being unpatentable over Oshiro et al. (JP402284125A with the translation on page 2, lines 4-10), in view of Gordon, II et al. (U.S. 6,184,856 B1).

Oshiro et al. (JP402284125A) with the translation discloses an electrophoretic device with plurality of cells. However, Oshiro et al. fails to teach a dielectric solvent or solvent mixture. Within the same field of endeavor, Gordon, II et al. teaches electrophoretic device with a dielectric solvent or solvent mixture 12a, 12b, 12c (col.6, line 7-10).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the electrophoretic device such as disclosed by Oshiro et al.(with translation), with a dielectric solvent or solvent mixture 12a, 12b, 12c such as discloses by Gordon, II et al., for purpose of displaying.

8. Claims 8-13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon, II et al.(U.S. 6,184,856 B1) in view of Oshiro et al. (JP402284125 A with the translation on page 2, lines 4-10).

a) With respect to claim 8, Gordon, II et al. discloses electrophoretic transmissive device comprising of: a) one top electrode plate (20) and one bottom electrode plate (8); and b) a plurality of cells (14, 16, 18) enclosed between the two electrodes, the cells which are filled with an electrophoretic suspension comprising charged particles dispersed in a dielectric solvent or solvent mixture 12a, 12b, 12c and seal (col.6, line 7-10). However, Gordon, II et al. does not disclose that a sealing layer placed between the electrophoretic suspension and one of the electrode plates. Within the same field of endeavor, Oshiro et al. (JP402284125A) and the translation (page 2, lines 4-10) teaches electrophoretic display with polymeric sealing layer is a hot-melt adhesive (9).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the electrophoretic device such as disclosed by Gordon, II et al. with polymeric sealing layer is a hot-melt adhesive such as discloses by Oshiro et al.(with translation), for purpose of sealing electrophoretic device.

b) With respect to claim 9, Oshiro et al. (JP402284125A with the translation on page 2, lines 4-10) further teach the electrode plate (4) with the sealing layer (9) is the top electrode plate and is viewing side, whereby both the top electrode plate and sealing layer are transparent, otherwise one can't view.

c) With respect to claims 11 and 12, Oshiro et al. (JP402284125A with the translation on page 2, lines 4-10) disclose that the sealing layer is an adhesive layer (9). However, Oshiro et al. does not implicitly disclose that the sealing layer is a polymer layer.

The use of general material for sealing layer such as polymer adhesive are well known in the art of electrophoretic for purpose of sealing display cells, lowering down manufacture and labor cost, as well as preventing mirror from breakage. Therefore, it would be obvious that the polymer is used in adhesive (9) as sealing layer for purpose of sealing display cells, lowering down manufacture cost and prevent device breakage.

- d) With respect to claims **10** and **15**, Gordon, II et al. in view of Oshiro et al. (JP402284125A with the translation on page 2, lines 4-10) disclose the single sealing layer (9) and the top electrode. However, Gordon, II et al. and Oshiro et al. fails to discloses another sealing layer or another adhesive layer with the same material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a second sealing or adhesive layer of the same material as that of layer (9), since it has been held that mere duplication of the essential working parts of a device involves only routing skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.
- e) With respect to claims **13** and **16**, Oshiro et al. (JP402284125A with the translation) discloses a hot-melt adhesive which the Examiner interprets as a radiation curable material.

9. Claims **17-19**, **21** and **22** are rejected under 35 U.S.C.103(a) as being unpatentable over Gordon, II et al.(U.S. Pat. 6,184,856 B1) in view of Oshiro et al. (JP402284125A with the translation), as applied to claim 8, and further in view of Robusto (U.S. 3,928,671A).

- a) With respect to claim **17**, the teachings of Gordon, II et al. and Oshiro et al. with translation are described with reference to claim 8 above; however, Gordon, II et al. and Oshiro

et al. does not teach bottom transparent electrode. Within the same field of endeavor, Robusto et al. teaches electrophoretic device with a bottom transparent electrode (col. 8, lines 34-36).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the electrophoretic device with bottom electrode such as disclosed by Gordon, II et al. and Oshiro et al.(with translation), with bottom transparent electrode such as discloses by Robusto et al., for purpose of transmitting light from back light to electrophoretic device.

b) With respect to claims **18** and **21**, Oshiro et al. (JP402284125A) with the translation further disclose the single sealing layer (9) and the top electrode. However, Oshiro et al. fails to discloses another sealing layer or another adhesive layer with the same material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a second sealing or adhesive layer of the same material as that of layer (9), since it has been held that mere duplication of the essential working parts of a device involves only routing skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

c) With respect to claims **19** and **22**, Oshiro et al. (JP402284125A) with the translation discloses a hot-melt adhesive which the Examiner interprets as a radiation curable material.

Allowable Subject Matter

10. Claims 14 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for the indication of allowable subject matter is that the sealing and adhesive layers are formed from different material disclosed in the claims is not found in the prior art.

11. Claims 23-25, 30 and 31 are allowed.

The reason for the indication of allowable subject matter is that (claim 23) the process for manufacturing an electrophoretic display comprising imagewise exposure through a photomask which moves at the same speed as a web substrate; (claim 30) an adhesive layer between the first electrode plate and the sealing layer in combination with a polymeric layer between the electrophoretic composition and the second electrode plate disclosed in the claims is not found in the prior art.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (703) 306-5712. The examiner can normally be reached on Monday to Friday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (703) 308-4883. The fax number for this Group is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Examiner: Tuyen Tra

Date: June 24, 2002


Hung Xuan Dang
Primary Examiner